PROVINCE OF SASKATCHEWAN

09-10

ANNUAL REPORT

SASKATCHEWAN
WATERSHED AUTHORITY

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For more information on Saskatchewan Watershed Authority or to obtain a digital copy of this report please visit **www.swa.ca.**

Letter of Transmittal - Minister

July 29, 2010

His Honour the Honourable Dr. Gordon L. Barnhart
Lieutenant Governor of Saskatchewan

May it Please Your Honour:

The Government of Saskatchewan is committed to delivering and building on its promises to the people of Saskatchewan. The Government is also committed to being accountable. One component of our commitment to accountability is to publish plans and to report on success in achieving the commitments made in those plans. As part of that commitment to accountability, the Watershed Authority, in this Annual Report, details the progress on each commitment made in its Plan for 2009-10 and also reports on a set of performance measures.

Your Government is also committed to responsible financial management. When the global recession began to impact provincial revenues, the Government instructed agencies to reduce expenditures in discretionary areas such as travel. The Watershed Authority reduced expenditure by $400,000.

Effective management of our water supplies is essential to maintain the quality of life in Saskatchewan and to assure continued opportunities for growth and development. The initiatives pursued in 2009-10, and those planned for 2010-11, will help ensure water continues to be available to support our communities.

Dustin Duncan

Minister Responsible
Saskatchewan Watershed Authority

Letter of Transmittal - Chair

June 29, 2010

The Honourable Dustin Duncan
Minister Responsible
Saskatchewan Watershed Authority

Sir:

I am pleased to submit the Annual Report of the Saskatchewan Watershed Authority for the fiscal year ending March 31, 2010.

Respectfully submitted,

Elizabeth Quarshie

Chair of the Board
Saskatchewan Watershed Authority

Letter of Transmittal - President

June 29, 2010

Elizabeth Quarshie
Chair of the Board
Saskatchewan Watershed Authority

Madam:

I have the honour to provide this report on the progress and accomplishments of the Saskatchewan Watershed Authority for the year ending March 31, 2010.

This report, prepared by the Saskatchewan Watershed Authority, presents an accurate and reliable account of the activities and finances for the 2009-10 fiscal year. Progress reports were prepared by management, and I affirm that the information included in these reports is factual and complete. Management also prepared the financial statements in accordance with Canadian generally accepted accounting principles for government organizations.

I affirm that management is responsible for financial and administrative management of the Watershed Authority. During the fiscal year management implemented a number of actions to control discretionary spending. These actions, which included restrictions on recruitment, travel and meetings, saved $400,000.

The Watershed Authority leads management of the province's water resources to ensure safe water sources and reliable water supplies for economic, environmental and social benefits for Saskatchewan people. Water is an immensely valuable resource, essential for the health of our population, economy and ecosystems. Effective management of water is thus very important to achievement of Government's three broad goals. The report describes actions the Watershed Authority took to ensure reliable water supplies.

These actions fall into five main areas of work:

- Managing the water supply for social and environmental needs;
- Protecting surface and ground water quality;
- Developing, own and manage the province's water management infrastructure;
- Collecting and analyzing data and providing information to support water management and use; and
- Reducing damage from flooding.

Some of the highlights of the Watershed Authority's work in 2009-10 include:

- Advanced water conservation by encouraging replacement of 16,333 toilets with new, low flow models.
- Initiated the Water Availability Study to provide a comprehensive assessment of surface and ground water supplies.
- Invested approximately $3,375,000 on the rehabilitation of its water management infrastructure, including a major repair at Theodore Dam.
- Worked with the Western Water Stewardship Council (western provinces and territories) on joint initiatives including water efficiency and drought preparedness.
- Released the second State of the Watershed Report on March 29, 2010.
- Conducted sampling of private wells at the village of Katepwa Lake and developed a Community Source Water Risk Assessment for the village of Katepwa Lake, which will be released early in 2010-11.
- Initiated, with funding from Agriculture and Agri-food Canada, a Watershed Evaluation of Beneficial Management Practices (WEBs) study to evaluate on a watershed level the impacts of beneficial management practices on water quality parameters such as nutrients, pathogens, and sediments.
- Published the Swift Current Creek Watershed Plan.
- Provided $820,000 to watershed associations to assist them in implementing their source water protection plans and spent $1,039,000 under the Water Control Program assisting local governments maintain and rehabilitate agricultural flood control works.
- Undertook engineering and environmental investigations and submitted applications to the federal and provincial regulators for approval to make the emergency berms at Fishing Lake permanent.

In the coming year we look forward to continued progress in managing our water supply. Negotiations with Canada and First Nations in the Qu'Appelle to resolve flood claims against Canada are nearing completion and we anticipate the First Nations will begin the ratification process for the agreements during 2010-11. The Watershed Authority will continue work to rehabilitate its infrastructure and maintain dam safety. Completion of the pilot ground water mapping of the Saskatoon Map Sheet will provide a template for ground water mapping in additional areas as part of the Water Availability Study. I look forward to reporting on these and other initiatives to ensure a safe and sustainable water supply in the 2010-11 Annual Report.

Respectfully submitted,

Wayne Dybvig

A/President
Saskatchewan Watershed Authority

Introduction

This Annual Report presents the Saskatchewan Watershed Authority's activities and results for the fiscal year ending March 31, 2010. It reports on public commitments made and other key accomplishments of the Watershed Authority.

With the release of the Watershed Authority's Plan for 2009-10, results are provided on the publicly committed strategies, actions and performance measures identified in the Plan. This report also demonstrates progress made on Government commitments as stated in the *Government Direction for 2009-10*, the Minister's Mandate Letter, throne speeches, and other commitments.

The 2009-10 Annual Report sets the stage for the planning and budgeting process by providing an opportunity to assess the accomplishments, results, and lessons learned, and identifying how to build on past successes for the benefit of Saskatchewan people.

The report also includes audited financial statements for the year ending March 31, 2010, prepared in accordance with *The Saskatchewan Watershed Authority Act, 2005*.

The Watershed Authority's latest plans and annual reports are available on our website at: **www.swa.ca/AboutUs/PerformancePlans.asp**.

Alignment with Government's Direction

The Saskatchewan Watershed Authority's activities in 2009-10 align with Government's vision and three goals:

Our Government's Vision

A secure and prosperous Saskatchewan, leading the country in economic and population growth, while providing a high quality of life for all.

Government's Goals

- **Sustain Economic Growth** for the benefit of Saskatchewan people, ensuring the economy is ready for growth and positioning Saskatchewan to meet the challenges of economic and population growth and development.
- **Secure Saskatchewan** as a safe place to live and raise a family where people are confident in their future, ensuring the people of Saskatchewan benefit from the growing economy.
- **Keep Government's Promises** and fulfill the commitments of the election, operating with integrity and transparency, accountable to the people of Saskatchewan.

Together, the Watershed Authority and all ministries and agencies support the achievement of Government's three goals and work towards a secure and prosperous Saskatchewan.

The Watershed Authority's initiatives meet all three of Government's Goals:

- To **Sustain Economic Growth** – working to ensure a sustainable water supply, including allocation of surface and ground water, delivering water conservation programming and operating and rehabilitating water management infrastructure.
- To **Secure Saskatchewan** – working with high-risk communities to identify and address threats to drinking water sources and reduce risk of flood damages in the province.
- To **Keep Government's Promises** – working toward reconciliation in water management, while meeting legal responsibilities for consultation and accommodation regarding First Nations and Métis peoples.

Organization Overview

As a Treasury Board Crown Corporation, the Saskatchewan Watershed Authority leads management of the province's water resources to ensure safe sources for drinking water and reliable water supplies for economic, environmental and social benefits for Saskatchewan people.

To manage surface water supplies, the Watershed Authority maintains and operates 45 dams and 130 kilometres of conveyance channels plus ancillary works, and makes significant investments in the rehabilitation and upgrading of this infrastructure each year. The Watershed Authority provides hydrology expertise to determine water supplies, guide allocations, and predict floods. All major surface water allocations, including municipal, industrial, irrigation, and intensive livestock uses, are approved by the Watershed Authority to ensure water use is sustainable. Employees from the Watershed Authority also represent Saskatchewan on trans-boundary water issues.

Much of Saskatchewan depends on ground water for domestic, industrial and agricultural uses. To protect this resource, the Watershed Authority licenses all but domestic users to ensure new development does not adversely impact existing users, operates the provincial ground water monitoring network, conducts regional ground water mapping and resource assessment, and provides information to citizens and industry to help locate ground water supplies.

Knowledge about water is crucial to successfully meet growing demand for water to support the growing economy while maintaining healthy ecosystems. Watershed Authority, through the Water Availability Study, hydrometric and water quality programs, is making significant investments in improving our knowledge of the quantity, quality and use of surface and ground water supplies.

To reduce flood damage Watershed Authority hydrologists map areas at risk in a 1:500 flood and work with Ministry of Municipal Affairs to ensure at risk development is prevented in those areas. The Watershed Authority provides financial assistance through the Water Control Program to municipalities and Conservation and Development Associations to maintain water channels and reduce flood risk and is working to develop long term flood protection for communities at Fishing Lake.

Public support and participation is crucial to efforts to protect source water. The Watershed Authority works with community representatives to develop source water protection plans for watersheds and aquifers. Plans have been completed in seven watersheds and one aquifer, and are currently in progress in three additional watersheds. The watershed associations which have formed to implement the source water protection plans are very important partners. The Watershed Authority works with and provides financial support to these associations to implement the plans, which include initiatives to help landowners improve watershed health through restoration of riparian areas, protection of wetlands and grasslands, and encouragement of management practices that benefit fish and wildlife and protect water sources.

Legislative Responsibilities

The Watershed Authority administers and is responsible for the following legislation:

- *The Saskatchewan Watershed Authority Act, 2005*
- *The Conservation and Development Act*
- *The Water Power Act*
- *The Watershed Associations Act*

Funding Resources

The Watershed Authority relies on several revenue sources, including grants from the province's General Revenue Fund; water rental charges through *The Water Power Act*; industrial water use charges; grants from the Ministry of Environment, Fish and Wildlife Development Fund; and contracts with government and non-government agencies, associations and other sources.

(continued)

Organization Overview

Organizational Structure

The Saskatchewan Watershed Authority is governed by a one-person Board of Directors, Liz Quarshie, (Deputy Minister of Environment) and the minister responsible is the Honourable Dustin Duncan.

The Watershed Authority has five divisions: Operations, Stewardship, Policy and Communications, Corporate and Human Services and Legal Services (see Appendix 1). At the end of the reporting period, the Watershed Authority had 177 employees, (173.21 full-time equivalents), a reduction of 13 full time equivalents compared to a year earlier.

The Corporate and Human Services Division also provides payroll services, finance, and information technology support to SaskWater on a contractual basis. The Watershed Authority's Head Office is located in Moose Jaw, but many services and programs are delivered through its regional offices in Nipawin, North Battleford, Swift Current, Weyburn and Yorkton and other offices in Regina and Saskatoon. The Watershed Authority also has offices at Gardiner Dam and Rafferty Dam (see Appendix 2).

Progress in 2009-10

The Saskatchewan Watershed Authority supports Government's goal to Sustain Economic Growth for the benefit of Saskatchewan people, ensuring the economy is ready for growth and positioning Saskatchewan to meet the challenges of economic and population growth and development.

Ensure water supplies are understood and sustainably used and allocated to meet the needs of a growing economy

The Watershed Authority controls the allocation of surface and ground water to ensure water use is sustainable and that commitments to existing users are met, to protect the health of aquatic ecosystems, and to meet obligations to downstream jurisdictions. The Watershed Authority also delivers water conservation programming to support sustainable water use.

The Watershed Authority collects data on water supplies and uses that information to guide water management. Operation of provincial projects, such as the Watershed Authority's major dams and SaskPower's hydro operations, requires careful planning to achieve project objectives and minimize negative impacts on other uses of the resource.

Reliable and extensive data is essential to the forecasting required for operation planning. Interpreting historic surface and ground water data and collecting comparable data on current supplies are important for guiding future water management and managing potential impacts of climate change.

Results

Water Conservation

Toilets are the largest consumer of water in a household and the widespread transition to low flow toilets supports sustainable water use. The four-year Provincial Toilet Replacement Rebate Program, funded through Go Green Saskatchewan, began in January 2009 and provides a $50 rebate for the replacement of a 13 litre or greater toilet with a low flow model.

During the 2009-10 fiscal year, $1,100,000 was invested in the program. Applications were received from 12,951 households and rebates were provided for 16,333 low flow toilets. In addition, through the Watershed Authority's water conservation partnerships with 30 municipalities, residents eligible for a rebate under the provincial program could apply for a further rebate from their municipality.

Reservoir Operating Plans

A Reservoir Operating Plan sets out guidelines for the operation of a reservoir under normal, low and high flow conditions. The Watershed Authority committed to begin the review and revision of existing plans for its reservoirs in 2009-10. The first revised plan for Theodore Reservoir was completed in the 2009-10 fiscal year and posted on the Watershed Authority's website as part of the information provided for dams and reservoirs. Draft plans were also completed for Makwa Lake, Scott Reservoir, Candle Lake and Lac La Ronge and plan revisions are underway for Cowan Lake, Buffalo Pound, and Lac la Plonge.

Water Availability Study

The Watershed Authority initiated a comprehensive assessment of ground and surface water supplies in 2009-10. Mapping of the ground water resources of the Saskatoon 1:250,000 map sheet was initiated in 2009-10. This map will address information deficiencies in a high-needs area and will provide a mapping template to be used province-wide. The template will be in a format that will make the data and knowledge produced accessible and user friendly. The completed groundwater maps will more efficiently and effectively assist users to find and protect groundwater, and assist the Watershed Authority to ensure water use is sustainable. The Saskatchewan Research Council is collaborating on the project.

Also in this fiscal year, the development of specific projects for assessment of surface water was initiated. One project will include the review and statistical analysis of climate data for a number of sites to determine if

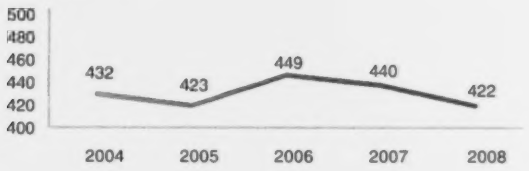
Progress in 2009-10

trends are developing related to climate change. Natural flow studies in smaller basins will be completed to determine if similar trends are developing, which could be linked to climate change. Also, current and future water supplies for the South Saskatchewan, North Saskatchewan and Churchill rivers will be determined. Finally, terms of reference for a project to determine future water supplies were developed. This study will consider current and projected water demands, variability in runoff, and scenarios for changes in water flows as a result of climate change.

In another study component, the Watershed Authority completed work on a water use pilot project in the Swift Current Creek watershed. Many agricultural users currently do not report their water use. Watershed Authority knows how much water is allocated but not what is actually used. Determining actual use is essential to manage future demand for water. The methodology included a file review, imagery analyses, a questionnaire to project owners, and field inspections of selected projects designed to determine project status and water use. The study identified a number of water allocations which are no longer being used, providing an opportunity to reallocate water to new users. The information and knowledge gathered from the pilot project will be applied to a broader water use assessment in the southwest area of the province in future years.

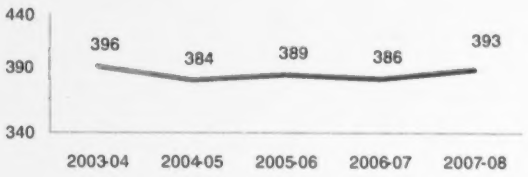
Measurement Result

Annual municipal per capita water consumption[1]



Litres per person per day[2]

Winter municipal per capita water consumption[1,2]



November to March

Litres per person per day

[1] Data is obtained from Watershed Authority's Saskatchewan Community Water Use Records which are collected on a calendar year basis. The 2009 data was not available at time of printing.

[2] Results shown in the Watershed Authority 2008-09 Annual Report and 2009-10 Plan have been adjusted to account for updated data.

These measures are indicators of water conservation specifically as it relates to municipal water use, which includes use in the home, in businesses, and for public services such as fire fighting, road building, public pools, and rinks. It also includes water lost due to system leakage. The annual consumption measure is highly influenced by weather, with irrigation demands for lawn and garden watering varying significantly between wet and dry years. The winter consumption measure more clearly shows trends in residential water use.

Residential water conservation is a critical component of overall municipal water conservation. In 2006, residential water use in Saskatchewan accounted for an estimated 44 per cent of the total annual municipal use.[3] Toilets alone account for an estimated 30 per cent of in-home residential use.[4] Current water conservation initiatives are focused on promoting residential conservation practices and should directly influence this measure. The Watershed Authority promotes conversion to low flow toilets through the Provincial Toilet Replacement Rebate Program and raises awareness of additional water conservation

[3] Environment Canada. 2006. "Municipal Water Use 2006 Summary Tables." Accessed at http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=851B096C-1#sub2 on February 18, 2010.

[4] Based on toilets accounting for an estimated 30 per cent of indoor usage. Source: Environment Canada. "Water Use in the Home." Accessed at http://ec.gc.ca/eau-water/default.asp?lang=En&n=851B096C-1#sub2 on February 18, 2010.

Progress in 2009-10

opportunities through direct mail outs and online resources such as the family water use calculator. As the conservation awareness initiatives and the Rebate Program were initiated in 2007-08 and 2008-09 respectively, it is projected that their influence will not be evident in the municipal water use numbers for several years. It should be noted that other water conservation initiatives, outside of the Watershed Authority's programs, influence in-home water use.

Also, because of the significant portion of non-residential water use included in this overall municipal measure, the impact of residential water conservation could be exaggerated or masked due to decreased or increased consumption in other areas of municipal use. However, in the interest of sustainable water use, if municipal water use rates as a whole do not begin to decrease within the next five years, it will be critical for the Watershed Authority to examine what other types of municipal water consumption are maintaining or increasing the usage rates and address these influences.

Operate, maintain and rehabilitate Watershed Authority-owned water structures to ensure safety and provide economic benefits

Saskatchewan's economic well-being is largely dependent upon the existence and continued functioning of the 45 water control structures and 130 kilometres of conveyance channels maintained and operated by the Watershed Authority. Lake Diefenbaker supplies water to the cities of Saskatoon, Regina, and Moose Jaw, a number of smaller communities, six potash mines, over 100,000 acres of irrigation, and other industrial uses. Rafferty Reservoir is essential for operation of Shand Thermal Power Station and to conserve Saskatchewan's share of the water arising in the Souris River Basin. While the magnitude of benefits afforded by the balance of the Watershed Authority's dams is lower, they nevertheless significantly contribute to the economic and social well being of Saskatchewan residents. Like all capital assets, these works depreciate and require a continuous investment in maintenance and rehabilitation to ensure their safety and ability to operate to meet the province's needs.

Results

Project Rehabilitation

The Watershed Authority invested approximately $3,375,000 during 2009-10 on the rehabilitation of its water management infrastructure. Activities included investigations, design and construction. In the 2009-10 Plan, the Watershed Authority committed to undertake rehabilitation of priority works in accordance with a 10-year plan to ensure all of the Watershed Authority-owned structures ultimately meet dam safety criteria. Details of the 2009-10 commitments follow:

- Intentions had been to replace the existing dilapidated timber control structure at the Makwa Lake outlet with a new gated concrete structure during the year. As part of the work, a fish passageway was also to be constructed at the new structure. Inability to secure required regulatory approvals from federal agencies forced deferral of construction until 2010-11.
- The Watershed Authority operates a pumpstation on the South Saskatchewan River which is used to maintain water levels on Pike Lake. Fluctuating river levels and unstable bank slopes render it difficult to install, operate and remove the pumping equipment annually. In the autumn of 2009, the Watershed Authority completed works to stabilize the river bank and allow the pumps to be lowered into the river on a rail system. This work, undertaken at a cost of approximately $293,000, will significantly reduce occupational health and safety issues with pump installation and removal, lower the cost of operation, and increase the reliability of water supply to the lake.
- During an inspection of Theodore Dam in early spring 2009, Watershed Authority staff noted earth cracks and slumping of the right dam abutment (contact area between embankment and the valley wall) giving

rise to serious concerns that a dam failure could result should above normal inflows to the reservoir occur. The Watershed Authority initiated immediate action to investigate and design remedial works to stabilize the abutment. Construction was initiated in mid-August and completed by the end of November 2009, restoring an adequate degree of safety prior to the 2010 spring runoff. This work was undertaken at an approximate cost of $1,621,000. Some minor clean-up work remains to be completed in 2010-11. The construction required that the reservoir be lowered, creating a risk of winterkill of the fish population. Watershed Authority installed two aeration units in the reservoir and monitored oxygen levels through the winter, successfully maintaining the fish population.

- As part of its dam safety program activities, the Watershed Authority monitors the performance of its high consequence dams with a variety of instrumentation. Data collected includes groundwater levels, lateral and vertical surface and subsurface movements of the dam and its foundation, as well as seepage flow measurements. With time, this instrumentation must be replaced and/or upgraded. In 2009-10, approximately $392,000 was spent to replace geotechnical instrumentation at Gardiner, Rafferty and Alameda dams. This sum also included the cost of soil sampling undertaken at Gardiner Dam and subsequent laboratory analyses. The test results will be used in planned stability analyses of the dam.

Other significant rehabilitation initiatives, not detailed in the 2009-10 Plan, were undertaken during the fiscal year:

- In late July, staff at Rafferty Dam noted the presence of a localized soft, wet area on the downstream face of the north dam abutment. This sudden appearance of seepage, with the reservoir level approximately 0.6 metres below full supply level engendered significant dam safety concerns. The Watershed Authority promptly engaged an engineering consultant to investigate the phenomenon and assess the safety of the dam. Analyses determined that stability improvements to the abutment were needed. In October 2009 and March 2010, the Watershed Authority installed subsurface drains as well as geotechnical instrumentation in the abutment to increase stability of the slope. The cost of this work was approximately $305,000. In the summer of 2010 intentions are to install an earthen berm at the toe of the slope to further enhance its stability.
- In 2007, a number of the rollers on the spillway gates at both Rafferty and Alameda dams were found to be seized. Subsequent assessment also revealed that the gate hoisting systems were under-designed. In 2008-09, the roller assemblies on all spillway gates were modified and partial upgrading of the gate hoisting systems completed. In 2009-10, upgrading of the hoisting systems at both projects was completed for a total cost of approximately $86,000.

Dam Safety

The Watershed Authority invested $1,022,000 during the year on dam safety management. These dam safety activities focus on identifying and addressing the risks to the Watershed Authority's dams, consistent with the Canadian Dam Association guidelines. The following dam safety activities to assess and manage the safety of works were undertaken in 2009-10:

- Historically, the Watershed Authority has conducted comprehensive safety inspections at five or six of its dams annually. These inspections are essential to identify potential problems before they can threaten the safety of a dam. These inspections have been undertaken on a five year recurring interval. In 2010, the Watershed Authority expanded the scope of these inspections, elevating them to internal dam safety reviews. During the 2009-10 fiscal year, reviews were conducted at seven projects including Scott, Theodore, Bradwell East, Bradwell West and Cowan,

Northminster and Lac la Ronge dams. All dams were in fair condition. No problems, defects, or unsafe conditions were identified by the reviews which require immediate attention. However, physical deficiencies were identified during the reviews. At Theodore Dam, the downstream portion of the low level CSP conduit has reached an age where it should be considered for replacement or re-lining. At Cowan Lake Dam, the control structure gate hoists date from 1949 and are extremely difficult to operate. Consideration should be given to replacing the hoists to ensure gate operability and to ensure safety of the operating staff.

- Owing to high priority work needed to address stability issues at Theodore and Rafferty dams, no geotechnical assessments were completed at other Watershed Authority dams during the year.
- In the event of an emergency, planning ahead can save lives, reconstruction costs, and limit the interruption of service to clients. The Watershed Authority's Dam Safety Policy indicates that its four major structures require Emergency Preparedness and Response Plans. Work advanced throughout the 2009-10 fiscal year to assemble emergency plans for Gardiner, Rafferty, and Alameda dams. Intentions are to finalize these plans during the 2010-11 fiscal year. In addition, and in response to a potential H1N1 flu pandemic, emergency response plans focusing on the operation of discharge works at the Watershed Authority's four major dams were prepared. Head Office employees were trained on how to operate spillways and low-level outlets at these dams in the event that site staff became incapacitated as a result of a flu pandemic.
- The Watershed Authority initiated a study to review the consequence classification of its dams during the latter part of 2008. To determine the incremental consequences of failure, dam break studies were completed at 13 dams during the 2009-10 fiscal year. In addition, life safety and damage assessments were completed for the Watershed Authority's full complement of dams. Environmental and socio-economic consequences assessments remain to be undertaken for some dams. The individual assessments will be aggregated to come up with a composite consequence assessment for each dam. The report will be completed in 2010. When the report is complete the Authority will be able to implement a program of dam safety reviews at intervals commensurate with the consequence of each dam.
- Site specific seismic hazard assessments were completed at nine Watershed Authority dams, including Gardiner, Qu'Appelle, Rafferty and Alameda dams. In addition, supplemental seismic hazard assessments were completed at a further eight dam sites thereby enabling results to be interpolated for all Watershed Authority dams. These hazard assessments provide earth ground motions values needed to assess whether the Watershed Authority's dams will remain sufficiently stable and functional during earthquake events.

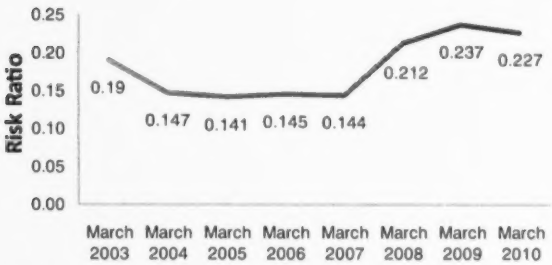
Qu'Appelle Valley Water Control Structures

Negotiations toward transfer of the Qu'Appelle Valley water control structures from Agriculture and Agri-food Canada to the Watershed Authority continued, however the transfer is not expected to be completed until after the flood claims by Qu'Appelle First Nations are settled. In 2009-10, the Watershed Authority was contracted by Agriculture and Agri-food Canada to operate Craven, Echo, and Crooked Lake control structures.

Progress in 2009-10

Measurement Results

Risk associated with water management infrastructure



Data from Watershed Authority Dam Project file D4-7-4.

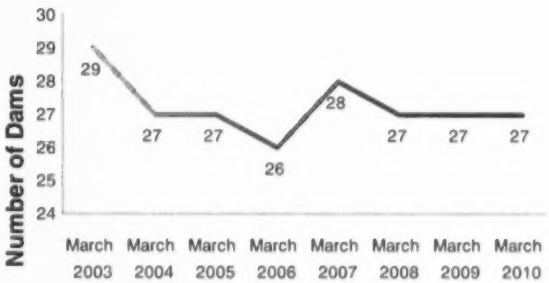
This measure gauges the Watershed Authority's progress in upgrading its infrastructure to acceptable standards and the overall risk associated with the province's water management infrastructure, including dams and water conveyance works. As an intermediate outcome measure, the Watershed Authority uses a ratio of the assessed risk to the total possible risk to establish targets and to measure progress in reducing risk associated with its infrastructure. Risk, defined as the likelihood of a failure multiplied by the consequences of a failure, has been assessed in relative values. A lower ratio indicates safer infrastructure, with a ratio of zero indicating no current assessed risk. Numerically the risk ratio can be expressed as:

Risk Ratio = $\sum$ Assessed Current Risk / $\sum$ Total Possible Risk.

The risk ratio increase in 2008 and 2009 was primarily due to the discovery of mechanical issues with the spillway gates at Rafferty and Alameda dams. In addition, independent dam safety reviews identified underslab drainage issues at Gardiner Dam spillway and the outlet works at the Qu'Appelle River Dam. While the Rafferty and Alameda dam spillway gate issues have been largely resolved, the risk ratio was not reduced in 2009-10 as much as had been targeted. This owed to the following:

- Replacement of the Makwa Lake Control Structure was deferred for a second year owing to the inability to secure needed regulatory approvals.
- Abnormal seepage appeared through the left abutment of Rafferty Dam, resolution of which could only be partially addressed prior to winter freeze-up.
- Abnormal seepage conditions appeared at the canal outlet works at Brightwater Reservoir.
- Physical condition of both Summercove and Zelma dams deteriorated over the year.

Number of dams requiring upgrades to meet safety and operational criteria



Data from Watershed Authority Dam Project file D4-7-4.

This measure quantifies the number of Watershed Authority dams that require upgrades to meet the provisions of the Dam Safety Guidelines (2007) published by the Canadian Dam Association. The Watershed Authority is responsible for 45 dams and, like all provincial governments and major utilities across Canada, manages its works generally in accordance with these Guidelines. Depending upon the dam, a failure could have significant economic and safety consequences. However, unlike the risk ratio measure, this measure does not indicate the severity of the identified deficiencies. This measure is useful in gauging progress made over time to reduce the number of deficient dams. As may be noted by the performance measure values of the past eight years, no real progress has been achieved in this respect, as newly discovered deficiencies supplant those resolved. Reducing this number will require increased investment in dam maintenance and rehabilitation.

Progress in 2009-10

The safety of dams and the operational capability of water conveyance works are fundamental to public safety and to dependable water supplies to support the economy. Upgrades require significant investments and will therefore be made over a number of years.

Work co-operatively with western provinces and territories to ensure effective water management

Most of the watersheds on which Saskatchewan depends for its water supply are shared with other jurisdictions. The Saskatchewan River system, which provides water for many of our cities, irrigation, and industry, arises in Alberta and flows into Manitoba. Saskatchewan therefore works with the western provinces and territories to ensure effective management of shared water supplies and to apply common knowledge and resources to challenges such as water conservation and drought preparedness.

Results

Western Water Stewardship Council

The Watershed Authority committed to continued collaboration in 2009-10 with the Western Water Stewardship Council (WWSC) partners (Alberta, British Columbia, Manitoba, Northwest Territories, Yukon and Nunavut) on joint initiatives relating to water efficiency, drought preparedness and water governance. In 2009-10, the WWSC:

- Advanced development of a national water efficiency labelling and standards program;
- Adopted shared principles and definitions for water use efficiency and demand management;
- Developed a work plan for preparing a Western Drought Preparedness Strategy;
- Shared watershed governance and planning models and tools;
- Highlighted opportunities for developing consistent water efficiency building and plumbing code provisions across WWSC jurisdictions;
- Established a SharePoint website to share information and tools on water efficiency, drought preparedness, and watershed governance;
- Collaborated with Regional Adaptation Collaborative program partners and Natural Resources Canada to advance projects that improve climate change adaptation;
- Developed long-term priority initiatives to guide the WWSC through its subsequent work planning periods.

During the Council of the Federation August 2009 meeting, the Premiers agreed to create a national-scale Water Stewardship Council based on the existing WWSC. Subsequently, a draft concept of the Council was reviewed by the Environmental Planning and Protection Committee of the Canadian Council of Ministers of Environment. Comments were submitted and options for moving forward will be considered in the 2010-11 fiscal year.

Prairie Provinces Water Board

The Watershed Authority committed to reassess surface water quality objectives for Prairie Provinces Water Board (PPWB) border sites in 2009-10 in collaboration with PPWB members. The Committee on Water Quality of the PPWB completed an analysis of historical data and finalized identification of parameters to be revised in setting the site specific surface water quality objectives for the 11 PPWB border sites. The next phase of setting the actual objectives will continue into the next fiscal year.

Develop policy, legislation and integrative policy processes to provide effective water management services

A modern and effective policy and legislative framework is critical to ensuring the Watershed Authority makes the best use of its resources. The Watershed Authority administers four acts and six regulations, and is reviewing this legislation and supporting policy to ensure effective and efficient water management to support Saskatchewan's continuing growth.

Progress in 2009-10

Results

Comprehensive Water Management Plan

In accordance with the Premier's direction through the speech from the throne, the Minister of Environment is leading the development of a comprehensive water strategy. The Authority is providing advice and assistance.

Legislation and Policy Development

Initial review of and proposals for provincial water legislation were developed. These proposals will be developed further and brought to government in the 2010-11 fiscal year.

Work continued on a Compliance and Enforcement Policy. Concepts from the work were considered in the initial legislation review. It is anticipated that the policy will be completed in the 2010-11 fiscal year and implemented to support the Government's broader goals around water.

Work to review the challenges with the current allocation system and the allocation approaches in other jurisdictions was initiated in the 2009-10 fiscal year. It is anticipated that work to develop a Water Allocation Policy will continue in the 2010-11 fiscal year, with the support of the multi-year Water Availability Study.

A complete review of its programs has led the Watershed Authority to initiate a more detailed review of the Reservoir Development Area Program. A planned review of the 40-year-old Reservoir Development Area Regulations for Blackstrap Reservoir was put on hold while the review of the entire Reservoir Development Area Program is completed and a decision made on the future of this program

The Watershed Authority began work on a comprehensive suite of corporate lands administration and management policies during this fiscal year. Policy completion is expected in 2010-11.

The Saskatchewan Watershed Authority supports Government's goal to Secure Saskatchewan as a safe place to live and raise a family where people are confident in their future, ensuring the people of Saskatchewan benefit from the growing economy.

Work with high-risk communities to identify and address threats to drinking water sources

The Watershed Authority has focused its rural water quality protection efforts on high-risk communities serviced by private ground water wells, some of which are identified by the Ministry of Health and various health districts. The objective of this program is to provide assistance to private well owners in identifying the nature, cause and implications of their specific drinking water quality concerns and the most appropriate means to correct them. Watershed Authority staff conduct water quality investigations and subsequently develop Community Source Water Risk Assessments that provide communities with information concerning their drinking water supplies and what can be done to improve safety of the water. In many cases, community infrastructure upgrades are recommended. The Watershed Authority operates the program in partnership with a high-risk community, the associated health district, and the Ministry of Health.

Results

Drinking Water Supply Risk Assessment

In 2009-10, the Watershed Authority completed a private well sampling survey with over 250 clients from the Village of Katepwa Lake who use private wells for potable purposes. One hundred and eighty-eight wells were tested. Fifty-two percent of the wells were found to exceed at least one Maximum Acceptable Concentration. The most common issues and percentages of private wells exceeding Health Canada's Guidelines for

Progress in 2009-10

Canadian Drinking Water Quality were total turbidity (33%), coliform bacteria (28.5%), arsenic (8.4%), uranium (3.9%) and lead (1.1%). Several *Aesthetic Objectives* (AO) which influence taste, odour, and staining were also commonly exceeded in Katepwa ground water, including manganese, iron, and sulphate. The results were shared with the individual clients, the village council and the Health Region and posted for public access on the Watershed Authority's website.

A risk assessment for the community was completed in February 2010 and discussions initiated to help the community apply the results to protect its water supply. At the end of the fiscal year A Community Source Water Risk Assessment for the Village of Katepwa Lake, outlining recommendations to reduce the risks to drinking water supplied by private wells, was being finalized and the community was considering how to address the issues identified by the assessment.

Recommendations to reduce risk include better management of wells, repairing casings and well caps and other steps to reduce risk of contamination, shock chlorination of wells with positive choliform bacteria results and treatments sytems to address turbidity and heavy metals. To date, about 18% of the well owners who participated in the survey, have implemented the recommendations outlined in the risk assessment. Plans to complete a risk assessment for a second community were postponed, as the unique situation of Katepwa Lake, a resort community, required testing both during the summer months and the fall to account for summer resort use and the permanent residents.

Reduce risk of flood damages in the province

Floods can impose significant costs in property damage and loss of production. The Watershed Authority works to minimize flood damage through the use of water management infrastructure and by predicting areas at risk of flooding to guide other ministries, municipalities and business in reducing flood risk. Dams, dykes and ditches can reduce the size and duration of floods while proper management of development in flood plains can avoid the large cost of property damage that could otherwise occur in a major flood.

Results

Fishing Lake

In late 2007, emergency flood control berms were constructed at Fishing Lake to protect residential and cottage developments around the lake. In the 2009-10 fiscal year, the Watershed Authority continued to assist the local communities. Pumps were transferred to local authorities to assist with water removal behind the berms to protect cottages from flooding in the future. Clean up of 2007 temporary berm construction was completed, along with some minor berm maintenance.

The Watershed Authority also worked with the local communities to develop long term flood protection plans. Communities have requested that the berms be incorporated into the overall flood protection measures. On behalf of the local communities, the Watershed Authority sought approval to upgrade the berms at Fishing Lake from the temporary emergency status to a permanent flood control feature. The Watershed Authority engaged a consultant to complete a feasibility level berm design and to determine the scope of work required to upgrade the berms. A project proposal for the berm upgrading project was submitted to the provincial and federal environmental assessment regulatory agencies for review.

Waldsea and Lenore lake flood mitigation

The Watershed Authority continued to seek solutions to the flooding problems at Waldsea Lake. This included contracting an engineering firm to examine options for the flood protection berms and evaluating the need for berms between Deadmoose and Waldsea lakes. Meanwhile, above-average precipitation continued to increase water levels in the Lenore Lake Watershed.

Progress in 2009-10

The Watershed Authority worked with and supported the Lenore Lake Planning Committee, comprised of municipal leaders in the area that have been evaluating measures to provide long-term flood protection for area lakes. Unfortunately, work of this committee was halted for several months while a law suit seeking to force closure of the overflow from Houghton into Lenore Lake was before the courts. In this suit, Watershed Authority successfully defended against an injunction to stop the flow from Houghton Lake to Lenore Lake.

Water Control Program

Watershed Authority spent $1,039,000 under the Water Control Program assisting local governments maintain and rehabilitate water channels, reducing risk of flooding on farmland and in communities. Fifty-eight conservation area authorities, four watershed associations and two towns received $490,000 in flood control maintenance grants, and 74 rural municipalities, two conservation area authorities and one watershed association received $378,500 for channel clearing. One individual received a grant of $1,000 for erosion control.

Hydrometric Network

The Watershed Authority continued its ongoing work to operate, with the Government of Canada, the 300-station federal/provincial hydrometric network. This network consists of 150 hydrometric stations operated by the Watershed Authority, along with 150 hydrometric stations that Water Survey of Canada operates. The information compiled is used to help predict flood peaks, to determine peak water levels, and to manage water supply.

Water flow data is collected at all hydrometric stations in the province. To allow informed decisions to be made in a timely manner, the data needs to be entered into the Watershed Authority's hydrometric program and turned into accessible knowledge for use by the Watershed Authority and third parties. Limited staff resources have resulted in 2,100 station-years of backlogged data. The Watershed Authority's anticipated work to begin addressing the data backlog was not initiated as other projects in the Water Availability Study took precedence.

Manage watersheds to meet aquatic ecosystem and fish habitat needs

Meeting aquatic ecosystem and fish habitat needs requires sound information and knowledge. To this end, the Watershed Authority undertakes a variety of monitoring and science projects in order to recognize trends in water quality and aquatic and watershed health, determine instream flow needs, better understand the impacts of land and water management practices on water quality and aquatic health, and model the hydrological impacts of drainage. Watershed Authority staff then work to make the information available and useful to citizens and interest groups in publications such as the State of the Watershed Report.

Results

State of the Watershed

The Watershed Authority released its second State of the Watershed Report on March 29, 2010. The State of the Watershed Report is a benchmark tool for assessing watershed health to ensure source water protection and sufficient water supplies for Saskatchewan people. The report uses indicators to assess the current health of Saskatchewan's watersheds, provide information about human activities that impact the environment within watersheds, and evaluate the effectiveness of the management activities. All of this information is presented in a report card format that is easy to understand.

Water Quality Sampling

The Watershed Authority continued its ongoing work to collect and assess water quality data from the province's primary water quality sampling sites and critical lakes.

Progress in 2009-10

This fiscal year, 20 samples were collected monthly at six critical lakes and a number of the 23 provincial primary sites. The trends in the data, in other words, the changes in the water quality over time and space, are assessed. This data is also assessed against the Water Quality Index, which is a composite measure of different chemicals and organisms in the water and of the overall water quality relative to particular surface water quality objectives and uses, such as the protection of aquatic life, livestock watering, or recreation. The information is essential to address specific issues and to be able to detect and understand long-term changes in water quality which may impact water users or ecosystems. This data was assessed and presented in the State of the Watershed Report and numerous technical documents and papers provided to government agencies, academia, industry and watershed stewardship groups.

Instream Flow Needs

Ensuring an adequate instream flow in controlled rivers is essential to maintain fish populations and healthy ecosystems. In 2008-09, the Watershed Authority continued work to develop and apply instream flow assessments on streams deemed at risk. Several studies were undertaken to examine the impact of water management on aquatic health, including a risk assessment examining the potential impact of all Watershed Authority owned and operated water control structures. Results of this assessment were used to focus studies examining potential impacts of water structures on stream flow in high-risk areas. In 2009-10, an initial 43 sites were screened and a more detailed assessment of 11 critical sites was undertaken to determine and set instream flow levels that balance the needs of the environment with the needs of local populations and industry. The work on these critical sites is expected to be completed in 2010-11.

The Lake Sturgeon is considered an endangered species in the Saskatchewan River system. As a step toward recovery of this species, in 2009-10, the first of a 3.5 year detailed investigation of Lake Sturgeon habitat selection and instream flow needs at the forks of the North and South Saskatchewan rivers got underway. Thirty-seven sturgeon were radio-marked and relocated weekly. An additional 75 sturgeon were uniquely marked with other tags. For the next two years sturgeon will be relocated and selected habitats quantified. Using these data, a habitat suitability model will be developed to quantify potential impacts of current water management and identify opportunities to enhance management. The Watershed Authority leads this project with funding and technical partnerships established with seven other agencies (projected $1.5 million over three years).

Ecological Health Sampling

In 2006-07, the Watershed Authority began work to develop a model that would provide an accurate assessment of the ecological health of surface water bodies in southern Saskatchewan, as well as a means to diagnose the causes of potential impairment to ecological health. By 2008-09, over 200 monitoring sites were established across southern Saskatchewan, covering existing Ministry of Environment primary sites, Prairie Provinces Water Board sites, long-term Ministry of Agriculture water quality sites, and Watershed Authority sites. One hundred and four of the sites that were least impacted by human activity were chosen to represent the healthiest "reference" sites, and the macroinvertebrate assemblages at these sites were established as the reference against which other sites could be compared. Because different types of macroinvertebrates respond species-specifically to particular types of disturbance, such as pollutants, the absence of expected macroinvertebrates can also be used to diagnose potential stressors to the aquatic ecosystem and potential mitigation strategies can be developed.

In 2009-10, macroinvertebrate samples were collected at an additional 100 baseline sites across southern Saskatchewan. Data from all 300 baseline sites was assessed to

determine the health of the aquatic ecosystem at those sites and how the macroinvertebrate community composition changes from relatively healthy to unhealthy sites. The ecological health assessment of the initial 200 monitoring sites was presented in the 2010 State of the Watershed Report.

Drainage Impact Study

Development of a Prairie Wetland Hydrology Model in the Smith Creek Watershed was completed under the leadership of the University of Saskatchewan, and in partnership with the University of Regina, Ducks Unlimited, and the Prairie Provinces Water Board. The work involved the development of analytical techniques to assess the impact of wetland drainage on the hydrology of a watershed and the assessment of the implications of drainage.

The project was launched in April 2007 with a field program set up in the Smith Creek Watershed, and a concurrent program to develop a computer simulation module capturing the hydrologic functions of prairie wetlands. With funding contributed by the Watershed Authority and other project partners, a six-month extension of the project from July to December 2009 was granted to refine and improve the effectiveness of the model. The modelling was completed and a final report was issued by the University of Saskatchewan. The University of Saskatchewan is conducting workshops to train hydrologists in use of the improved model, which will improve Saskatchewan's ability to predict flows and manage water.

Evaluation of Best Management Practices

In 2009-10, the Watershed Authority initiated a Watershed Evaluation of Beneficial Management Practices (WEBs) study to evaluate on a watershed level the impacts of beneficial management practices on water quality parameters such as nutrients, pathogens, and sediments. Watershed Authority, with its partners, directs significant effort to implementing beneficial management practices in watersheds to improve water quality. The WEBs project, funded by Agriculture and Agri-food Canada, is one of a number of similar projects across Canada intended to measure the impacts of agricultural beneficial management practices and so is an important step in assessing the effectiveness of Watershed Authority programs. The federal Government approved the establishment of a Watershed Evaluation Best Management Practices Site in Saskatchewan in February 2010. Funding was allocated and data collection for the first year of the study was initiated. No results are available yet from this study.

Water quality monitoring at Fishing Lake and lakes within the Lenore Lake watershed

The Watershed Authority continued lake water quality monitoring within several Saskatchewan watersheds where there have been specific concerns. The principal concerns include the potential impacts of long-term flood proofing and berm construction on Fishing Lake, and potential downstream changes in water quality due to outflow from lakes that usually do not have outflow into Lenore Lake.

Lake water quality monitoring in Fishing Lake included sampling at baseline stations located near the middle of the lake and sites adjacent to the berms. One of the primary water quality concerns due to berm construction was the potential for increased levels of suspended sediment. Water quality results were posted regularly on the Watershed Authority's website and were an essential aspect of complying with environmental approvals.

Extensive water quality monitoring of streams and lakes within the Lenore Lake Watershed was undertaken to provide an understanding of changes in lake salinity associated with flow conditions. Water quality results from stations between Houghton and Lenore lakes were posted on the Watershed Authority's website as soon as they were received from the laboratory. The information gained has been essential to Watershed Authority and other agencies in developing an understanding

Progress in 2009-10

of the potential ecological impacts of inflow of saline water from Houghton Lake to Lenore Lake.

Work with communities to develop and implement watershed and aquifer plans to protect our water resources

The Watershed Authority leads local advisory committee representatives through a process to develop watershed or aquifer plans. Watershed plans are directed at protection of surface water and aquifer plans are directed at ground water. Completed plans identify emerging water issues and identify key actions needed to protect source water. Local implementation committees lead or influence others to undertake implementation of actions. The Watershed Authority provides funding and technical advice to the local implementation committees. Implementation of actions will increase the protection of water resources.

Results

Watershed Planning, Implementation and Evaluation

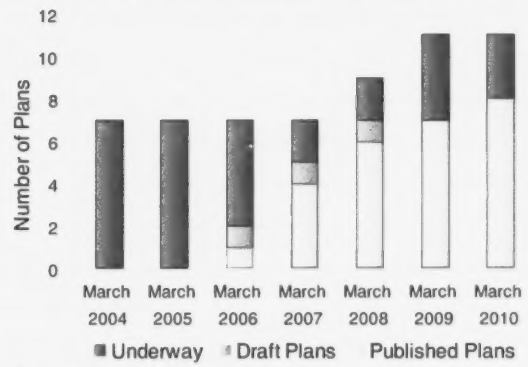
The Watershed Authority distributed $820,000 to support plan implementation. Work completed by the groups included coordination of plan implementation, delivering agri-environmental group plans, zero release projects for sewage lagoons, watershed evaluation of best management practices, drought preparedness, ecological goods and services, and First Nation engagement. The Watershed Authority also worked with watershed group staff to deliver programs, coordinate implementation and leverage external funding.

Work to evaluate the current Watershed and Aquifer Planning Model, to ensure that it aligns with a comprehensive water management approach, was postponed to 2010-11.

The Watershed Plan for the Swift Current Watershed was published in October 2009. Watershed planning continued in the Upper Souris River (initiated June 2008), Carrot River (initiated September 2008) and Lower Qu'Appelle River (initiated March 2009). The Upper Souris River Planning Committee established an interim board, achieved non-profit corporate status and hired a coordinator. The plan is expected to be published by September 2010. Both the Carrot River and the Lower Qu'Appelle River planning committees have held open-houses, planned watershed tours and workshops, assembled technical committees, produced background folios and have held or planned monthly Watershed Advisory Committee meetings. These plans are forecast to be completed in September 2011 and September 2012, respectively.

Measurement Results

Number of watershed and aquifer plans under development, in draft, and published



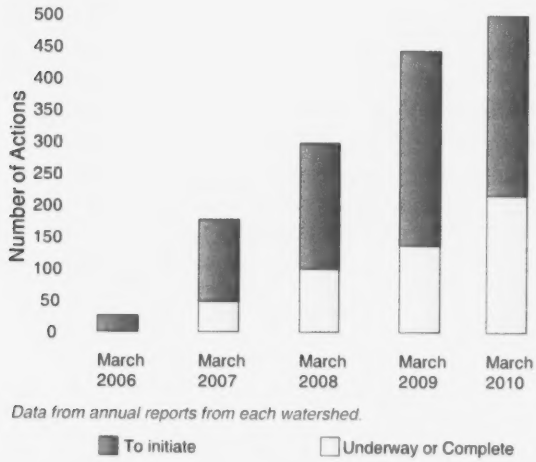
Data from Watershed Authority Planning Files.

This measure is of interest to Government as an indicator of progress toward source water protection, supporting adequate and quality water supplies. Local advisory committee representatives develop watershed or aquifer plans, with watershed plans directed at protection of surface water and aquifer plans directed at ground water. Completed plans set water management priorities and identify emerging water issues.

Progress in 2009-10

The Watershed Authority leads the planning process, directly influencing this measure. Originally the Watershed Authority initiated seven plans and as plans were completed and staff became available additional planning processes were initiated. The measure illustrates that the first completed plans occurred in year three, and the numbers reflect that planning processes are consistently coming to completion.

Total number of watershed and aquifer plan key actions underway or complete in province



Data from annual reports from each watershed.

This measure is an indicator of progress toward source water protection. Watershed and aquifer plans identify key actions needed to protect source water. Each key action specifies the organization(s) responsible for implementation. Local implementation committees lead or influence others to undertake implementation of actions. The Watershed Aauthority provides funding and technical advice to the local implementation committees, influencing implementation. As actions are undertaken, the degree of protection of source waters within the watersheds and aquifers is expected to increase and water threats minimized. This measure illustrates the number of key actions underway or complete. Since the first plan was completed in 2006, over 200 source water protection actions have been undertaken within the planning areas. As new plans are completed, additional actions are identified, thus the total number of actions has been increasing over time.

The Saskatchewan Watershed Authority supports Government's goal to Keep Government's Promises and fulfill the commitments of the election, operating with integrity and transparency, accountable to the people of Saskatchewan.

Work toward reconciliation in water management while meeting legal responsibilities for consultation and accommodation regarding First Nations and Métis peoples

In accordance with provincial policy, the Watershed Authority consults with and accommodates, as appropriate, First Nations and rights-bearing Métis communities in advance of decisions or actions which may adversely impact Treaty and Aboriginal rights. The Watershed Authority is also involved in seeking resolution of other First Nations issues, especially flood claims against Canada by First Nations in the Qu'Appelle.

Results

Qu'Appelle Valley Agreements

Drafting of the legal agreements to achieve a long-term settlement of Muscowpetung, Pasqua, Sakimay and Cowessess First Nations' flood claims against Canada in the Qu'Appelle Valley is nearing completion. Once the drafting process is complete, ratification of the agreements by the First Nations, Saskatchewan and Canada will commence.

The Watershed Authority has been in the process of negotiating water management (formerly called co-management) agreements with the Muscowpetung, Pasqua, Sakimay and Cowessess First Nations in the Qu'Appelle Valley. This activity is in response to requests from the First Nations involved in the flood

claim settlements and is intended to help address and resolve matters related to the protection, enhancement and management of the aquatic environment in the Qu'Appelle River Basin. At year end, the water management agreements with Cowessess and Sakimay First Nations (re: Crooked Lake) and Muscowpetung and Pasqua First Nations (re: Pasqua Lake) were in the final stages of drafting.

Consultation

In the 2009-10 fiscal year, the Watershed Authority held discussions with Fishing Lake First Nation, the Ministry of First Nations and Métis Relations, and Fisheries and Oceans Canada with regards to making the flood protection berms on Fishing Lake permanent and mitigating for loss of fish habitat caused by the construction of the berms. To better enable this process, the parties designed an engagement plan that includes a gathering of Fishing Lake First Nation elders, a number of one-on-one interviews with community members and discussions with the chief and council. This information will be used to develop a plan to help ensure the continued good health of the Fishing Lake aquatic ecosystem.

Attract, retain and build professional staff by supporting employee growth and development and increasing employee engagement

The Watershed Authority faces recruitment and retention challenges due to retirements, shortage of available and trained replacement workers, and increasing competition for the short supply of available workers. With a significant number of retirements anticipated within the Watershed Authority during the next five years, a targeted, prioritized recruitment program and effective training programs and retention strategies for key positions will be essential to ensure the Watershed Authority continues to effectively undertake its water management responsibilities.

Due to the nature of the technical work involved in managing water, the Watershed Authority employs a large number of professional engineers, hydrologists, hydrogeologists, ecologists, scientists, agrologists and engineering technologists. It has been a challenge to recruit senior, trained employees for many of these disciplines making it imperative to ensure that junior staff is recruited and adequately trained and that knowledge transfer from senior staff is facilitated to ensure continuity of programs. Labour force estimates show that the Watershed Authority will be competing for talent in one of the fastest growing areas of employment: professional, scientific and technical services.

Results

Succession Strategy

The Watershed Authority planned to develop and implement a Corporate Succession Strategy to address the large number of retirements expected over the next five years. In 2009-10, detailed retirement projections by division, work unit and job title were completed. A draft succession strategy was put forward for consideration and includes the establishment of recruitment priorities by job in consideration of succession needs for the next five years and proactive approaches to developing a talent pool for succession placement.

Collective Agreement

The Watershed Authority began to negotiate a new Collective Agreement with Communications, Energy and Paperworkers Union to replace the Agreement that expired December 31, 2009. Bargaining proposals were exchanged between management and Local 820 in early January 2010. As of March 2010, management and the Union were jointly investigating dates to begin more formal and detailed discussions of each parties' bargaining proposals.

2009-10 Financial Overview

Summary of Financial Results

During the 2009-10 year, the Saskatchewan Watershed Authority realized an operating deficit of $5,143,000. This compares to a 2008-09 surplus of $3,390,000, prior to the financial impact of the flood relief projects. The revenues for the current year totalled $23,901,000, a decrease from budgeted revenues of $26,143,000, (2008-09 - $30,698,000) and expenses at $29,044,000 were below the budget of $34,327,000 but increased from $27,308,000 in 2008-09. The deficit compares with the budgeted deficit of $8,184,000 and so reflects a $3,041,000 improvement from the budget.

Revenue was below budget by $2,242,000; water flows were below normal thus generating less *The Water Power Act* revenue than budget. Offsetting this, expenses were below budget by $5,283,000. The most significant under expenditures relate to the Toilet Replacement Rebate Program and expenditures on the Water Availability Study. Also, $400,000 was saved by active measures to reduce expenditure including curtailing out-of-province travel and meetings and not filling vacancies.

Compared to 2008-09, revenues decreased due to a reduction in grant funding from the General Revenue Fund ($3,062,000) and *The Water Power Act* revenue which was down $2,944,000 due to lower flows. The reduced grant from the General Revenue Fund is primarily because a one-time grant to support the provincial Toilet Replacement Rebate Program was received in 2008-09 and additional funds were not needed during 2009-10. Expenses have increased compared to 2008-09 due to the Toilet Replacement Rebate Program and Water Availability Study.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

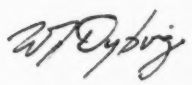
Management has prepared the financial statements of the Authority in accordance with Canadian generally accepted accounting principles for government organizations. The financial data included elsewhere in this report is consistent with the financial statements and the underlying information from which the Authority prepared these financial statements.

Management has the primary responsibility for the integrity and objectivity of the financial statements. To fulfill this responsibility, the Authority maintains appropriate systems of internal controls, policies and procedures. These systems provide reasonable assurance that assets are safeguarded and that the books and records reflect the authorized transactions of the Authority.

Deloitte & Touche LLP, the Authority's external auditors, have examined the March 31, 2010 financial statements and their report follows.

The Board of Directors of Saskatchewan Watershed Authority has examined and approved the statements.

On behalf of the Authority,



Wayne Dybvig
Acting President

May12, 2010

AUDITORS' REPORT

To the Members of the Legislative Assembly

Province of Saskatchewan

We have audited the statement of financial position of Saskatchewan Watershed Authority as at March 31, 2010 and the statements of operations and accumulated surplus, change in net financial assets and cash flows for the year then ended. These financial statements are the responsibility of Saskatchewan Watershed Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of Saskatchewan Watershed Authority as at March 31, 2010 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles for government.

Deloitte & Touche LLP

Chartered Accountants

Regina, Saskatchewan

May 12, 2010

Statement 1

Statement of Financial Position
As At March 31

	2010	2009
	(Thousands of Dollars)	
FINANCIAL ASSETS		
Cash	$ 14,200	$ 20,056
Accounts receivable	4,957	4,706
	19,157	**24,762**
LIABILITIES		
Accounts payable and accrued liabilites	2,040	1,969
Flood relief projects obligations (note 3)	4,401	5,422
Deferred revenue (note 4)	1,532	1,602
Employee future benefits (note 5)	786	679
	8,759	**9,672**
NET FINANCIAL ASSETS	**10,398**	**15,090**
NON FINANCIAL ASSETS		
Tangible capital assets (note 6)	300,887	301,395
Prepaid expenses and supplies	214	262
	301,101	**301,657**
ACCUMULATED SURPLUS	**$ 311,499**	**$ 316,747**

Commitments and contingencies (note 8)

See accompanying notes

On Behalf of the Board,

Elizabeth Quarshie
Chair of the Board

Statement 2

Statement of Operations and Accumulated Surplus
Year Ended March 31

	Budget	2010	2009
	(unaudited) (note 11)		
	(Thousands of Dollars)		
REVENUE			
Government of Saskatchewan			
- General Revenue Fund	$ 7,533	$ 7,533	$ 10,595
- Fish and Wildlife Development Fund	828	828	828
Water revenue	15,574	13,124	16,286
Contract revenue (Schedule 1)	750	1,003	1,156
Other	1,458	1,413	1,833
	26,143	**23,901**	**30,698**
EXPENSES (Schedule 2)			
Corporate services	4,725	3,021	3,205
Regional services	9,064	7,183	6,021
Infrastructure management	3,992	4,062	3,317
Stewardship projects and administration	2,605	2,750	2,435
Watershed monitoring and assessment	2,395	2,716	2,317
Watershed planning	871	650	1,518
Hydrology services	2,127	2,082	2,067
Interjurisdictional water management and administration	3,201	1,159	1,231
Groundwater management	1,279	1,107	1,026
Interest	68	16	45
Amortization of tangible capital assets	4,000	4,298	4,126
	34,327	**29,044**	**27,308**
(Deficit) surplus for the year before the following	**(8,184)**	**(5,143)**	**3,390**
Expenses related to flood relief projects (note 3)	**-**	**105**	**130**
(Deficit) surplus for the year	**(8,184)**	**(5,248)**	**3,260**
Accumulated surplus – beginning of year	**316,747**	**316,747**	**313,487**
Accumulated surplus – end of year	**$ 308,563**	**$ 311,499**	**$ 316,747**

See accompanying notes

Statement 3

Statement of Change in Net Financial Assets
Year Ended March 31

	2010	2009
	(Thousands of Dollars)	
(Deficit) surplus for the year	$ (5,248)	$ 5,260
Acquisition of tangible capital assets	(4,104)	(2,614)
Amortization of tangible capital assets	4,298	4,126
Loss (gain) on sale of tangible capital assets	29	(5)
Proceeds on sale of tangible capital assets	285	5
	(4,740)	4,772
Use of prepaid expenses and supplies	48	31
(Decrease) increase in net financial assets	(4,692)	4,803
Net financial assets – beginning of year	15,090	10,287
Net financial assets – end of year	$ 10,398	$ 15,090

See accompanying notes

Statement 4

Statement of Cash Flows
Year Ended March 31

	2010	2009
	(Thousands of Dollars)	
CASH PROVIDED BY (USED IN)		
OPERATING ACTIVITIES:		
(Deficit) surplus for the year	$ (5,248)	$ 3,260
Items not affecting cash:		
Amortization of tangible capital assets	4,298	4,126
Loss (gain) on sale of tangible capital assets	29	(5)
Net change in non-cash balances relating to operations:		
Accounts receivable	(251)	9,051
Prepaid expenses and supplies	48	31
Accounts payable and accrued liabilities	71	(1,795)
Flood relief projects obligations	(1,021)	(3,277)
Employee future benefits	107	(29)
Deferred revenue	(70)	(65)
	(2,037)	11,297
CAPITAL ACTIVITIES:		
Acquisition of tangible capital assets	(4,104)	(2,614)
Proceeds on sale of tangible capital assets	285	5
	(3,819)	(2,609)
(Decrease) increase in cash during the year	(5,856)	8,688
Cash – beginning of year	20,056	11,368
Cash – end of year	$ 14,200	$ 20,056

See accompanying notes

Notes to the Financial Statements, March 31, 2010

1. STATUS OF THE SASKATCHEWAN WATERSHED AUTHORITY

The Saskatchewan Watershed Authority (the Authority) was established on October 1, 2002, under the authority of *The Saskatchewan Watershed Authority Act*. The Authority is a Treasury Board Crown corporation within the meaning of *The Crown Corporations Act, 1993*. The Authority is a continuing corporation of the Saskatchewan Wetland Conservation Corporation, established by Order in Council 29/90 dated January 10, 1990.

On October 1, 2002, the Saskatchewan Water Corporation transferred involvement in water management activities to the Saskatchewan Watershed Authority. These activities included the operations, maintenance and rehabilitation of provincially-owned water infrastructure including dams and conveyance channels, as well as the hydrometric, forecasting and regulatory functions of the Corporation.

In accordance with the provisions of *The Saskatchewan Watershed Authority Act, 2005* the Authority's general powers and purposes are to manage, administer, develop, control and protect the water, watersheds and related land resources of Saskatchewan and to promote the economical and efficient use, distribution and conservation of the water, watersheds and related land resources.

2. SIGNIFICANT ACCOUNTING POLICIES

These financial statements have been prepared using Canadian generally accepted accounting principles appropriate for the public sector. The following accounting principles are considered to be significant:

Tangible Capital Assets

Tangible capital assets are recorded at cost. Internally provided engineering and technical services are capitalized at charge out rates designed to recover salaries, benefits and overhead. The objective of this policy is to recognize the approximate value of design, supervision and administrative services rendered by Authority employees on construction projects. As well, the Authority capitalizes interest expense on debt relating to specific construction projects. Charges for amortization are calculated at the following annual rates:

Tangible Capital Assets	Method	Rate
Buildings and leaseholds	straight-line	4%
Maintenance equipment	diminishing balance or straight-line, as appropriate	15% to 30%
Office equipment	straight-line	10% to 50%
Water infrastructure	straight-line	1.67% to 5%

Government of Saskatchewan Grants

Under the authority of Section 27 of *The Saskatchewan Watershed Authority Act, 2005* the Authority receives grants from the General Revenue Fund out of monies appropriated by the legislature or authorized by Order in Council. These grants are recorded as revenue when received or receivable and are used to fund grant programs, water management infrastructure rehabilitation and operations.

Notes to the Financial Statements, March 31, 2010

2. SIGNIFICANT ACCOUNTING POLICIES continued

Revenue Recognition

Contractual revenue received by the Authority for specific purposes is recognized as revenue in the year in which the related expenses are incurred. Water revenue is recognized as revenue in the year it is consumed. Other revenue includes: licences, fees, permits, interest income, pumping equipment rental and a service contract with SaskWater. These revenues are recognized in the year they are earned.

Grants to Clients

Grants provided to clients for a variety of programs are recorded as an expense to the Authority if the final approval for the grant payment was made during the year. Where the Authority enters into contractual agreements for project construction under various assistance programs, expenses are accounted for on an accrual basis.

Employee Future Benefits

The Authority administers a benefit relating to a retirement allowance which is paid to eligible employees upon retirement. The Authority has adopted the accrual method of accounting for this benefit whereby the cost of providing the benefits is recorded when the related services of employees are performed.

Measurement Uncertainty

The preparation of financial statements in conformity with Canadian public sector generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenditures during the reporting period. Significant areas requiring the use of management estimates relate to the useful lives of assets for amortization periods and estimated future costs of the flood relief projects.

3. FLOOD RELIEF PROJECTS OBLIGATIONS

In the spring of 2007, Fishing and Waldsea Lake areas experienced extraordinary flooding due to well above normal runoff. On April 30, 2007, the government announced emergency measures to assist these communities to respond to the flooding, including coordinating the necessary measures to remove homes and cottages from the water, and development of long term protection from flooding. The Authority and Ministry of Corrections, Public Safety and Policing lead this emergency work.

The project included construction, operation and removal of earthen berms to allow for the dewatering of residential areas that were flooded. As a condition of the Department of Fisheries and Oceans' (DFO) permit issued to the Authority, the berms were to be removed by October 15, 2009. The General Revenue Fund granted the Authority $24,799,000 during 2007-08 to undertake these projects. The Authority expended $17,816,000 to March 31, 2008, and accrued an additional $8,699,000 as estimated costs of berm removal, to be incurred in future years, for a total expense of $26,515,000 in 2007-08.

During the 2009-10 year, the Authority incurred $1,021,000 (2009 - $3,277,000) on these projects related to construction completion. These costs were applied against the 2008 accrual. The long-term flooding solution is still being investigated. DFO has extended its permit to October, 2010. The remaining $105,000 incurred in 2009-10 relates to costs for drainage investigations in the flooded areas.

Notes to the Financial Statements, March 31, 2010

4. DEFERRED REVENUE

At year-end, the Authority has received funding for various projects but has not yet completed the projects. The balance that remains in deferred revenue includes the depredation fund established for the Souris Basin project to deal with wildlife and waterfowl depredation prevention and compensation.

	2010	2009
	(Thousands of Dollars)	
Balance, beginning of year	$ 1,602	$ 1,667
Contractual revenues received	86	156
Recognition of prior year deferred revenue	(156)	(221)
Balance, end of year	$ 1,532	$ 1,602

5. EMPLOYEE FUTURE BENEFITS

The amounts related to the defined benefit retiring allowance are as follows:

	2010	2009
	(Thousands of Dollars)	
Accrued benefit liability	$ 786	$ 679
Benefits paid during the year	22	49
Net expense	129	20

The significant actuarial assumptions adopted in measuring the Authority's accrued benefit liability at March 31 are:

	2010	2009
Discount rate	5.00%	6.70%
Inflation rate	2.50%	2.75%
Average remaining service life	11 years	11.7 years

6. TANGIBLE CAPITAL ASSETS

			2010	2009
			(Thousands of Dollars)	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Land	$ 5,155	$ -	$ 5,155	$ 5,155
Buildings and leasehold improvements	1,164	349	815	1,039
Maintenance equipment	2,398	1,716	682	722
Office equipment	1,939	900	1,039	942
Water infrastructure	384,220	91,024	293,196	293,537
	$ 394,876	$ 93,989	$ 300,887	$ 301,395

Notes to the Financial Statements, March 31, 2010

7. GRANTS TO CLIENTS

Included in expenses are grants or assistance provided to various persons and organizations to carry out a variety of programs administered by the Authority. In addition, where the condition of financial assistance for certain programs requires the Authority to provide engineering or technical services, an allocation of salaries to grant expenses is made. Particulars of these grants, including salary/overhead allocation of $636,400 (2009 - $563,100), by program, are as follows:

	2010	2009
	(Thousands of Dollars)	
Flood Control and Drainage	$ 1,039	$ 1,110
Water Quality	448	378
Stewardship	160	149
Pumping Equipment Rental Program	113	328
	$ 1,760	$ 1,965

8. COMMITMENTS AND CONTINGENCIES

Contractual Commitments

As of March 31, 2010, the Authority has outstanding commitments of $523,400 (2009 - $429,000) for construction contracts, consulting agreements, and watershed funding agreements. Within various contractual agreements, the Authority has committed to provide in-kind services. If contracts were terminated, the Authority's only liability would be for actual costs incurred to-date.

Leases

The Authority has entered into various operating lease agreements with the following minimum lease payments:

	(Thousands of Dollars)
2011	$ 930
2012	884
2013	865
2014	855
2015	571
2016 and thereafter	784
	$ 4,889

Litigation

The Authority is party to a number of lawsuits of which the outcome can not be determined, therefore, no amounts have been allowed for settlement in these statements.

Notes to the Financial Statements

9. RELATED PARTY TRANSACTIONS

Included in these financial statements are transactions with various Saskatchewan Crown corporations, ministries, agencies, boards and commissions related to the Authority by virtue of common control by the Government of Saskatchewan and non-Crown corporations and enterprises subject to joint control or significant influence by the Government of Saskatchewan (collectively referred to as "related parties").

Routine operating transactions with related parties are settled at prevailing market prices under normal trade terms. These transactions and amounts outstanding at year end, are as follows:

	2010	2009
	(Thousands of Dollars)	
Water, contract and other revenue	$ 13,534	$ 16,392
Expenses	3,646	3,766
Accounts receivable	4,071	3,809
Accounts payable	177	116

Other amounts and transactions due to and from related parties and the terms of settlement are described separately in these financial statements and the notes thereto.

10. PENSION PLAN

The Authority's employees participate in either the Capital Pension Plan or the Public Employees Pension Plan (the Plans), both of which are defined contribution pension plans. The Authority's contributions to the Plans include making regular payments into the Plans. The total amount paid into the Plans for 2010 was $846,000 (2009 - $819,700).

11. BUDGET FIGURES

The budget figures are presented for comparison purposes. The Authority's Board of Directors approved this budget on April 17, 2009.

Schedule 1 - Contract Revenue

	2010	2009
	(Thousands of Dollars)	
Canadian Wildlife Service	$ 280	$ 280
Environment Canada	91	241
Wildlife Habitat Canada	100	100
United States - Federal and State	64	96
Canada Saskatchewan Water Supply Expansion Program	-	20
Provincial Council of Agriculture Development and Diversification Boards of Saskatchewan Inc.	100	60
Other	368	359
	$ 1,003	**$ 1,156**

Schedule 2 - Expenses by Program

	Corporate services	Regional services	Infrastructure management	Stewardship projects & administration	Watershed monitoring & assessment	Watershed planning	Hydrology services	Interjurisdictional water management & administration	Groundwater management	Interest & Amortization	2010 Total	2009 Total
											(Thousands of dollars)	
Salaries and benefits	$ 3,949	$ 3,628	$ 2,739	$ 1,082	$ 1,576	$ 424	$ 1,093	$ 382	$ 714	$ -	**$ 15,587**	$ 15,323
Travel and other staff costs	289	237	199	188	204	46	133	26	13	-	**1,335**	1,684
Professional services	239	197	452	27	319	-	23	80	150	-	**1,487**	1,037
Office supplies	522	85	32	24	35	10	37	25	6	-	**776**	746
Materials	1	25	122	5	44	-	22	-	4	-	**223**	199
Contractual services	-	71	289	52	-	6	504	490	-	-	**1,412**	1,413
Cash grants	-	870	-	1,166	-	-	-	-	-	-	**2,036**	1,039
Salary allocations	(2,998)	865	78	144	376	120	217	135	166	-	**(897)**	(953)
Other expenses	1,019	1,205	151	62	162	44	53	21	54	4,314	**7,085**	6,820
Total	**$ 3,021**	**$ 7,163**	**$ 4,062**	**$ 2,750**	**$ 2,716**	**$ 650**	**$ 2,082**	**$ 1,159**	**$ 1,107**	**$ 4,314**	**$ 29,044**	**$ 27,308**

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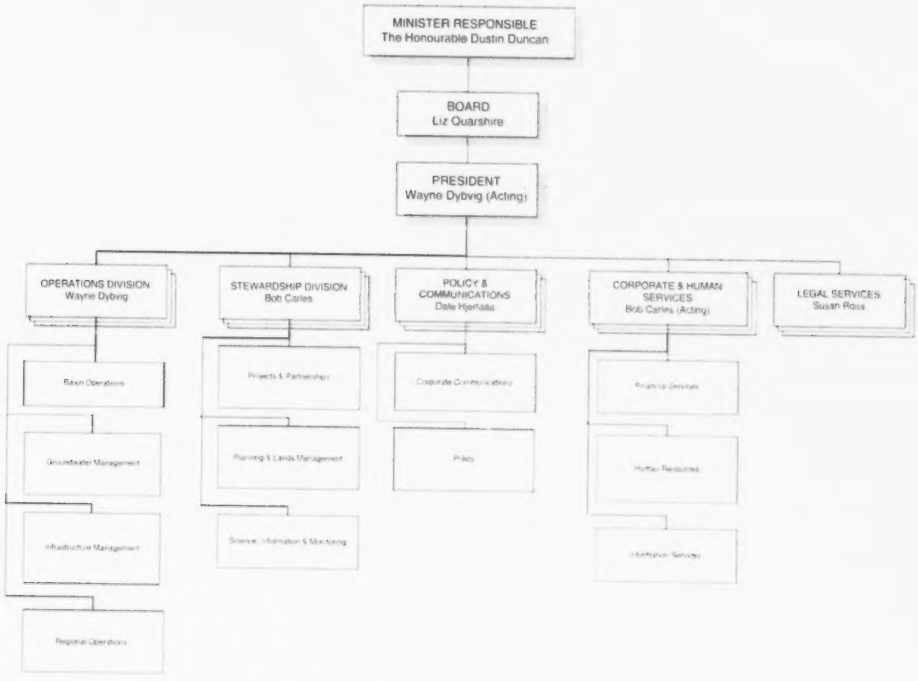
Total	$ 3,021	$ 7,183	$ 4,062	$ 2,750	$ 2,716	$ 650	$ 2,082	$ 1,159	$ 1,107	$ 4,314	$ 29,044	$ 27,308

For More Information

More detailed information can be obtained by visiting the Saskatchewan Watershed Authority's website at **www.swa.ca**, calling its head office in Moose Jaw at 306-694-3900, or contacting the water inquiry line toll free at 1-866-SASK-H20 (1-866-727-5420).

Appendix 1: Organizational Chart



Appendix 2: Regions and Office Locations